Honeywell

3 Inch Dome Camera

NTSC / PAL

HD3C, HD3CB
HD3D, HD3DB
HD3CH, HD3CHB
HD3CX, HD3CBX
HD3DX, HD3DBX
HD3CHX, HD3CHBX

User Guide

Document 800-00788 – Rev C – 07/08

Revisions

Issue	Date	Revisions
A	09/07	New document.
B	10/07	Updated *Figure 2*, *Figure 3*, and *Figure 4*. Added metric screws to surface and flush mount installations.
C	07/08	Updated regulatory to Class B.

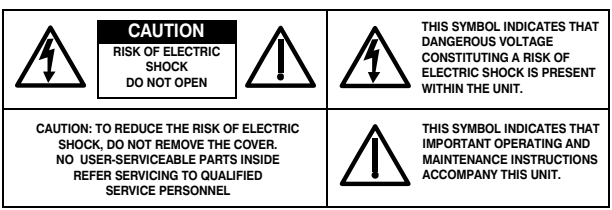
Warnings

Installation and servicing should be performed only by qualified and experienced technicians to conform to all local codes and to maintain your warranty.

WARNING! **The Use of CSA Certified/UL Listed Class 2 power adapters is required to ensure compliance with electrical safety standards.**

WEEE (Waste Electrical and Electronic Equipment). Correct disposal of this product (applicable in the European Union and other European countries with separate collection systems). This product should be disposed of, at the end of its useful life, as per applicable local laws, regulations, and procedures.

Explanation of Graphical Symbols



FCC Compliance Statement

Information to the User: This equipment has been tested and found to comply with the limits for a Class B digital device. Pursuant to Part 15 of the FCC Rules, these limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or a radio/TV technician for help.

Caution Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

Manufacturer's Declaration of Conformance

The manufacturer declares that the equipment supplied with this guide is compliant with the essential protection requirements of the EMA directive 89/336/EEC and the Low Voltage Directive LVD 73/23 EEC, conforming to the requirements of standards EN 55022 for emissions.

Contents

Introduction 6
Before You Begin 6
Unpack Everything 6
Cautions and Operating Notes 7

Installation 8
Removing the Dome Cover 9
Mounting the Camera. 10
Preparing the Mounting Surface (Surface or Flush Mount) 10
Connecting the Wiring 11
4S Electrical Junction Box 12
Surface Mount 13
Flush Mount 14
Adjusting the Camera Position. 15
Optional Camera Settings 16
Attaching the Dome Cover. 18
Routine Maintenance 19
Product Dimensions. 20

Warranty and Service 21

Specifications 22

Cable Guidelines. 24

Introduction

The unobtrusive, compact design of the HD3 Series 3 Inch Dome Camera (HD3) is ideal for indoor installations in commercial and residential environments.

Before You Begin

Please read this guide carefully before you install the HD3 Series 3 Inch Dome Camera. Keep this guide for future reference.

Unpack Everything

Check that the items received match those listed on the order form and packing slip. The HD3 packing box should include, in addition to this Install Guide:

- One fully assembled camera
- One hardware kit
- One 2nd video monitor output cable
- One mounting template

If any parts are missing or damaged, contact the dealer you purchased the camera from or call Honeywell Customer Service (see p. 27 for contact information).

Cautions and Operating Notes

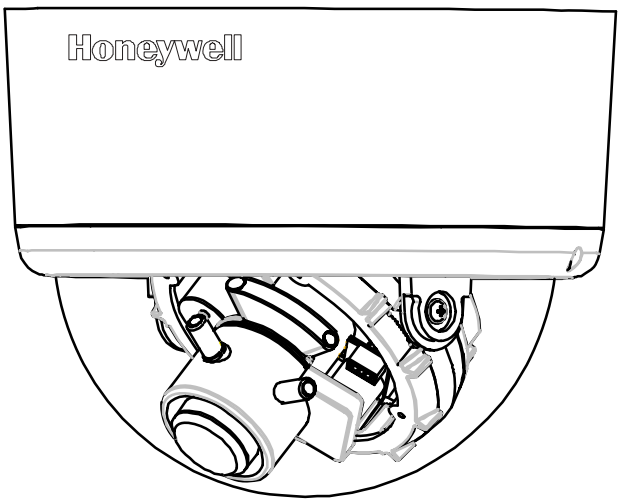
Power Supply This dome camera can operate on 24 VAC or 12 VDC.

Operating Conditions Avoid:

- Viewing bright objects (example, light fixtures) for extended periods.
- Operating or storing the unit in the following locations:
  - Extremely humid, dusty, hot/cold environments (where the operating temperature is outside the recommended range of 14°F to 122°F [-10°C to +50°C])
  - Close to sources of powerful electromagnetic radiation, such as radio or TV transmitters
  - Close to fluorescent lamps or objects reflecting light
  - Under unstable light sources (may cause flickering)

Installation

The HD3 is a fully-integrated enclosure with camera and lens.

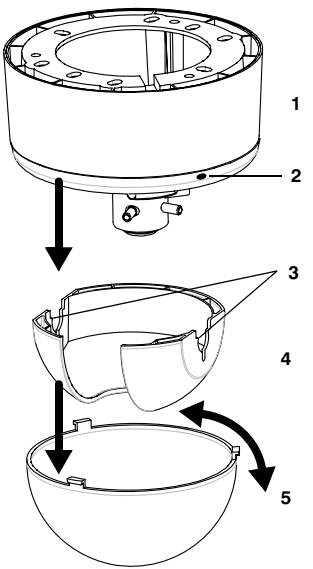


Note See *Figure 7* for an explanation of the camera board settings.

Removing the Dome Cover

1. **Gently** turn the dome cover counter-clockwise (**#5** on *Figure 1*) to unlock, and pull free of the housing. If required, loosen the security screw **(#2)** first.
2. Remove the inner liner (**#4**) by **gently** pulling it free of the two notches (**#3**) in the housing (**#1**). Set the dome (and liner) aside.

Figure 1 Dome Cover Removal



Legend

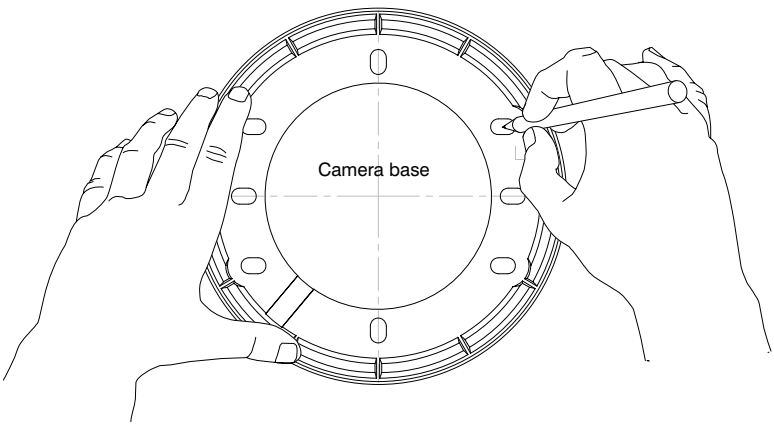
1	Camera housing
2	Security screw
3	Notches (x2)
4	Inner liner
5	Dome cover

Mounting the Camera

The HD3 can be surface or flush mounted to a ceiling or wall.

Preparing the Mounting Surface (Surface or Flush Mount)

1. Place the camera base (or the mounting template supplied on page 26) on the mounting surface and mark the holes as shown below.

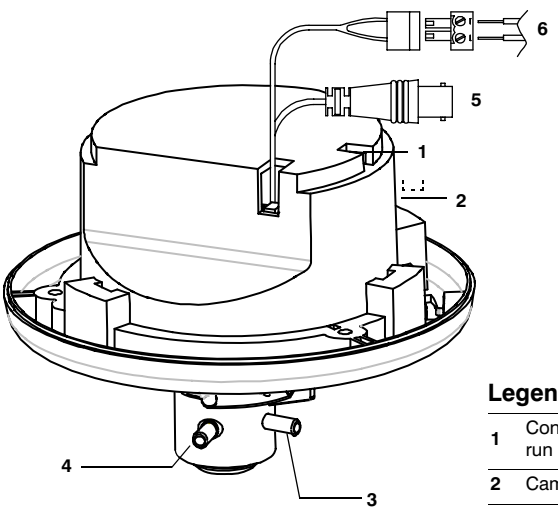


2. Drill the holes, then insert the screw anchors into the holes.

Connecting the Wiring

Follow *Figure 2* to connect the video output connector (**#5**) and 24 VAC/12 VDC power connector (**#6**).

Figure 2 Wiring



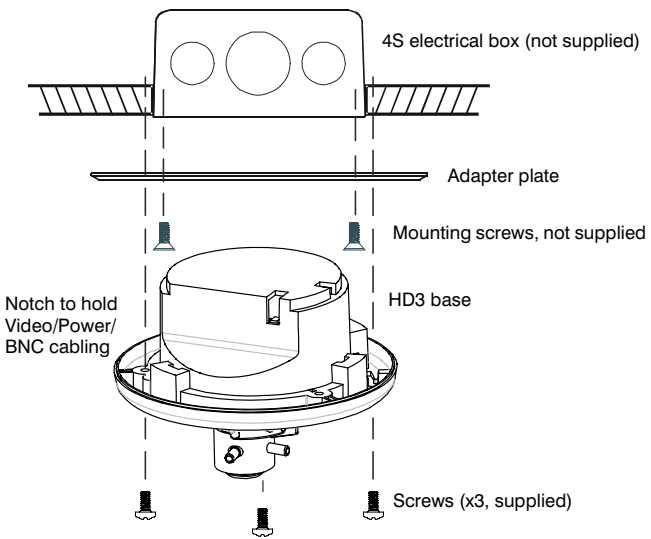
Legend

1	Conduit hole used for surface run power/video connector
2	Camera housing
3	Focus lever (top)
4	Zoom lever (bottom)
5	Video output connector
6	24 VAC/12 VDC power input connector

4S Electrical Junction Box

1. Use the adapter plate to cover ceiling or wall imperfections around the electrical box opening (see *Figure 3*). Secure the adapter plate to the electrical box using appropriate screws (not supplied).
2. If necessary, tuck the Video/Power and BNC cabling into the notch.
3. Secure the camera base with the three screws, supplied.

Figure 3 4S Electrical Junction Box Installation



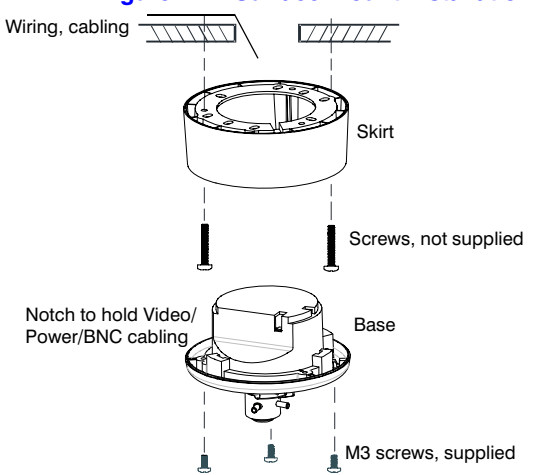
Surface Mount

1. For adapter plate installations — for example, when mounting to a ceiling tile — secure the skirt with M4 screws of an appropriate length (not supplied), as shown in *Figure 4*).

   When not using the adapter plate, secure the skirt to the ceiling or wall using M4 screws of an appropriate length (not supplied) for your mounting surface. The screws should be capable of holding at least twice the weight of the camera.

2. If necessary, tuck the Video/Power and BNC cabling into the notch.
3. Secure the camera base with M3 screws (supplied).

Figure 4 Surface Mount Installation

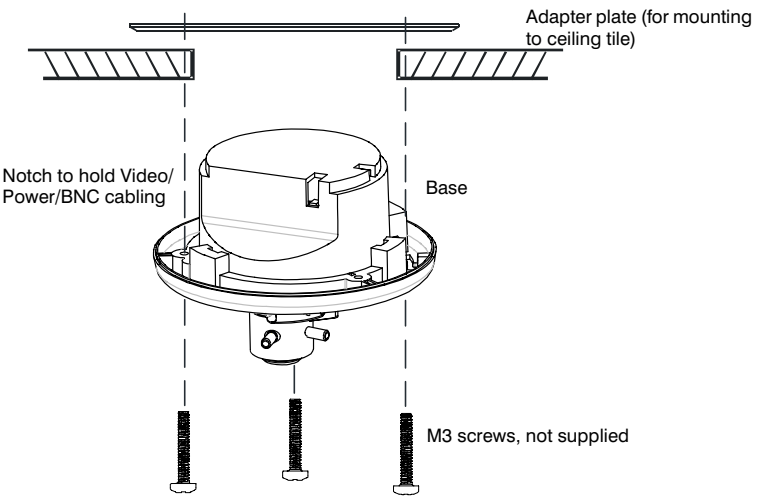


Flush Mount

1. Follow *Figure 5* to mount the HD3 flush to a ceiling or wall.
2. If necessary, tuck the Video/Power and BNC cabling into the notch.
3. For adapter plate installations, secure the base with **M3 screws** of a length appropriate to your installation (not supplied).

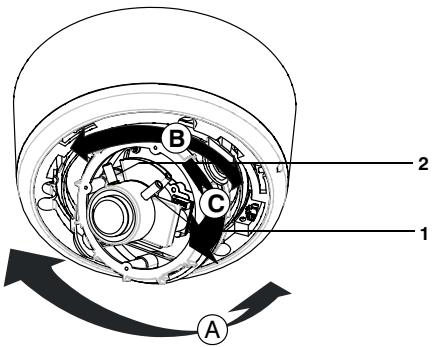
   When not using the adapter plate, use **M3 screws** of a length appropriate for your mounting surface (not supplied). The screws should be capable of holding at least twice the weight of the camera.

Figure 5 Flush Mount



Adjusting the Camera Position

Figure 6 Camera Position Adjustment



Legend

1	Focus lever (top) sets focus
2	Zoom lever (bottom) sets focal length
A	Tilt rotation
B	Horizontal rotation
C	Pan rotation

While monitoring the video signal:

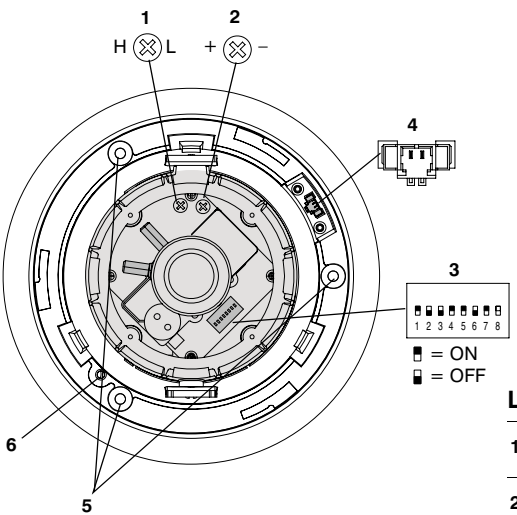
1. If required, loosen the screw that locks the gimbal assembly in place (see *Figure 7*).
2. Adjust the camera carrier to the desired view.
3. Tighten the screws to lock the gimbal assembly in place.

Caution Do not turn the lens more than 360° as this may cause the internal cables to twist and disconnect or break.

Optional Camera Settings

Figure 7 shows the location of the camera adjustment switches on the camera board. Their functions are described after *Figure 7*.

Figure 7 Camera Adjustment Functions



Legend

1	LEVEL adjustment pot (Iris level)
2	V Phase adjustment pot (24 VAC only)
3	Mode setting DIP switches (see page 18)
4	Monitor out
5	Camera mounting holes (x3)
6	Setscrew

Note Please use the supplied DC Iris and Line lock adjustment tool to adjust picture brightness and phase adjustment.

Picture Brightness Use the LEVEL screw (**#1**) to compensate for the iris level. **L** (low) makes the picture darker. **H** (high) makes the picture brighter.

Phase Adjustment Use the V Phase Adjustment Pot (**#2**) to adjust the phase difference between cameras. Make sure Switch 7 is ON to activate the Line lock function (AC operation only).

DIP Switches Depending on your camera model, set the DIP switches (**#3**) to activate or deactivate the following functions:

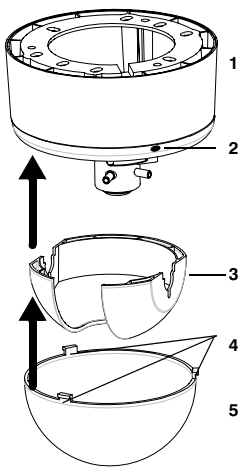
Switch	High Res + TDN	High Res	Standard Res
1	**DC**/AES	**DC**/AES	**DC**/AES
2	AWB/**ATW**	AWB/**ATW**	AWB/**ATW**
3	BLC ON/**OFF**	BLC ON/**OFF**	BLC ON/**OFF**
4	AGC **ON**/OFF	AGC **ON**/OFF	AGC **ON**/OFF
5	**TDN**	Not used	FLK
6	FLK ON/**OFF**	FLK ON/**OFF**	LL **ON**/OFF
7	LL **ON**/OFF	LL **ON**/OFF	Not available
8	Not used	Not used	Not available

Attaching the Dome Cover

When you are satisfied with your field of view and image settings, follow *Figure 8* to attach the dome cover:

1. Use a soft, lint-free cloth to wipe the dome cover clean and remove fingerprints.
2. Attach the inner liner (**#3**) to the base until the liner clicks into place.
3. Align the dome cover (**#5**) with the three dome tabs (**#4**) on the unit.
4. Turn the dome **gently** clockwise until it locks in place.
5. If desired, secure the dome to the base with the security screw.

Figure 8 Dome Installation



Legend

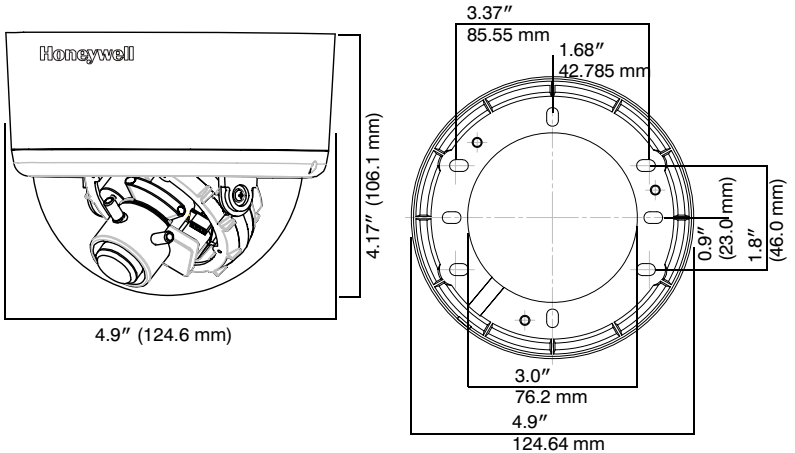
1	Camera housing
2	Security screw
3	Inner liner
4	Dome tabs (x3)
5	Dome cover

Routine Maintenance

- The dome cover is an optical part. Use a soft, dry cloth to remove any fingerprints or dust.
- Clean the camera housing with a soft, dry cloth. For more stubborn stains, use a cloth dampened with a small quantity of neutral detergent, then wipe dry.

Caution Do not use volatile solvents such as alcohol, benzene or thinners to avoid damaging the surface finish.

Product Dimensions



Warranty and Service

Subject to the terms and conditions listed on the Product warranty, during the warranty period Honeywell will repair or replace, at its sole option, free of charge, any defective product returned prepaid.

In the event you have a problem with any Honeywell product, please call Customer Service for assistance or to request a **Return Merchandise Authorization (RMA)** number. Call 1.800.796.CCTV (North America only).

Be sure to have the model number, serial number, and the nature of the problem available for the technical service representative.

Prior authorization **must** be obtained for all returns, exchanges, or credits. **Items shipped to Honeywell without a clearly identified Return Merchandise Authorization (RMA) number may be refused**.

Specifications

Video Signal Specifications	NTSC		PAL	
Video Standard:	High Res	Standard Res	High Res	Standard Res
Scanning System:	525 lines, 2:1 Interlace			
Image Sensor:	1/3” Interline Transfer CCD			
Number of Pixels (H x V):	768 x 494	510 x 492	752 x 582	500 x 582
Minimum Illumination: (AGC on, 50 IRE)	0.6 lux @ F1.3	0.2 lux @ F1.3	0.6 lux @ F1.3	0.2 lux @ F1.3
Horizontal Resolution:	540 TVL	350 TVL	540 TVL	350 TVL
Video Output:	1.0 Vp-p @ 75 Ohms			
Sync System:	12 VDC: Internal, 24 VAC: Line lock			
S/N Ratio:	50 dB (AGC Off)			
AGC Control:	On/off, switchable			
Auto Electronic Shutter:	1/60 - 1/100,000 sec		1/50 - 1/100,000 sec	
Lens Iris Control:	Direct Drive (DC) AI			
White Balance:	ATW			
AI/AES Selection:	On/off, switchable			
Lens Type:	2.8 mm to 10.0 mm Vari-focal Auto Iris, F1.3			

Focal Length:	f = 2.8 mm to 10 mm
Gamma:	0.45
BLC:	On/Off, switchable
Flickerless:	On/Off, switchable
Line Lock:	On/Off, switchable
Electrical Specifications	
Input Voltage:	12 VDC/24 VAC
Input Tolerance:	11 - 16 VDC, 17 - 28 VAC
Power Consumption:	3.5 W (max)
Mechanical	
Dimensions (WxH):	4.9″ x 4.17″ (124.6 mm x 106.1 mm)
Weight:	.66 lb (.3 Kg) Net, 1.32 lb (.6 Kg) Shipping
Construction:	Housing and dome: Polycarbonate
Environmental	
Temperature:	Operating: -14°F to 122°F (-10°C to 50°C) Storage: -4°F to 140°F (-20°C to 60°C))
Relative Humidity:	0% to 90%, non-condensing
Regulatory	
Emissions	FCC, CE (EN55022)
Immunity	CE (EN50130-4)
Safety	UL60065, EU: 73/23/EEC LVD

Cable Guidelines

Maximum Power Supply Cable Length (feet/meters) Cameras With AC/DC Power Supplies

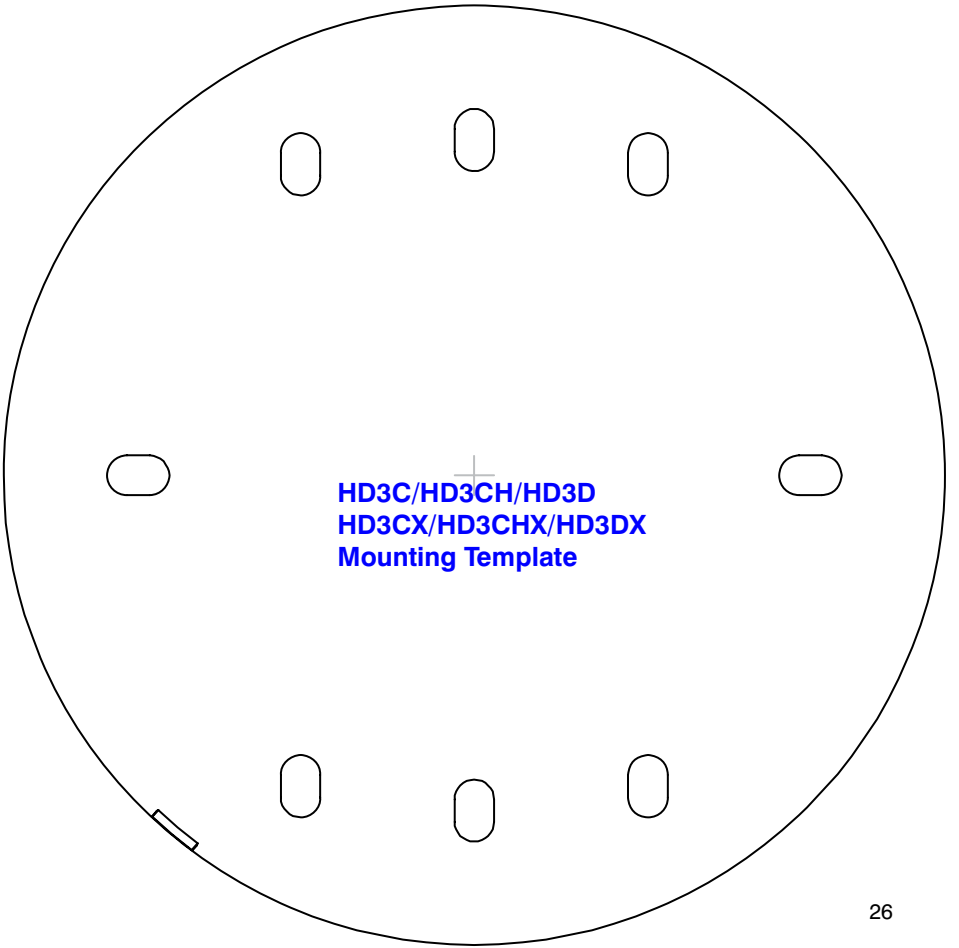
		Wire gauge			
Total load	Power supply	24 AWG	22 AWG	18 AWG	16 AWG
High Res	12 VDC	89/27	148/45	374/114	597/182
	15 VDC	348/106	61/171	1427/435	2273/693
	24 VAC	991/302	1601/488	4061/1238	6462/1970
Std Res	12 VDC	236/72	384/117	977/298	1555/474
	15 VDC	420/128	679/207	1729/527	2752/839
	24 VAC	1155/352	1866/569	4736/1444	7541/2299

Caution Calculations are based on an unregulated linear power supply, which would be the worst case. Using a regulated or switching power supply can increase the cable distance. Honeywell recommends using a **CSA Certified/UL listed Class 2** power adapter to ensure compliance with electrical safety standards.

Maximum Video Coaxial Cable Length (feet/meters)

Cable type	RG-59	RG-6	RG-11
Wire gauge	23 AWG*	18 AWG*	14 AWG*
Maximum length (feet/meters)	750/229	1500/457	2000/610

* Copper clad steel core, 95% braided shield


HD3C/HD3CH/HD3D
HD3CX/HD3CHX/HD3DX
Mounting Template

Honeywell Video Systems (Head Office)
2700 Blankenbaker Pkwy, Suite 150
Louisville, KY 40299, USA
www.honeywellvideo.com
☏ +1.800.796.2288

Honeywell Security Australia Pty Ltd.
Unit 5, Riverside Center, 24-28 River Road West
Parramatta, NSW 2150, Australia
www.honeywellsecurity.com.au
☏ +61.2.8837.9300

Honeywell Security Asia Pacific
33/F Tower A, City Center, 100 Zun Yi Road
Shanghai 200051, China
www.asia.security.honeywell.com
☏ +86 21.5257.4568

Honeywell Security Asia
Flat A, 16/F, CDW Building, 388 Castle Peak Road
Tsuen Wan, N.T., Hong Kong
www.asia.security.honeywell.com
☏ +852.2405.2323

Honeywell Security South Africa
Honeywell House, Bekker Street
Truer Close, Waterfall Park
Midrand 1685, South Africa
www.honeywell.com/security/za
☏ +27.11.695.8000

Honeywell Security Middle East
Honeywell Middle East FZE
Post Office Box 18530
LOB Building 08, Office 199
Jebel Ali, Dubai U.A.E.
www.honeywell.com/security/me
☏ +971.04.881.5506

Honeywell Video Systems Northern Europe
Netwerk 121
1446 WV Purmerend, The Netherlands
www.honeywell.com/security/nl
☏ +31.299.410.200

Honeywell Security UK
Aston Fields Road, Whitehouse Ind Est
Runcorn, Cheshire, WA7 3DL, UK
www.honeywell.com/security/uk
☏ +44.1928.756.999

Honeywell Security Deutschland
Johannes-Mauthe-Straße 14
D-72458 Albstadt, Germany
www.honeywell.com/security/de
☏ +49.74 31.8 01.0

Honeywell Security France
Parc Gutenberg, 8, Voie La Cardon
91120, Palaiseau, France
www.honeywell.com/security/fr
☏ +33.01.64.53.80.40

Honeywell Security Italia SpA
Via della Resistenza 53/59
20090 Buccinasco
Milan, Italy
www.honeywell.com/security/it
☏ +39.02.4888.051

Honeywell Security España
Mijancas 1. 3a planta
P. Ind. Las Mercedes
28022 Madrid, Spain
www.honeywell.com/security/es
☏ +34.902.667.800

Honeywell

www.honeywellvideo.com
+1.800.796.CCTV (North America only)
HVSsupport@honeywell.com

Document 800-00788 – Rev C – 07/08

© 2008 Honeywell International Inc. All rights reserved. No part of this publication may be reproduced by any means without written permission from Honeywell Video Systems. The information in this publication is believed to be accurate in all respects. However, Honeywell Video Systems cannot assume responsibility for any consequences resulting from the use thereof. The information contained herein is subject to change without notice. Revisions or new editions to this publication may be issued to incorporate such changes.